

# **NIBIB/NHLBI/NSF Workshop on Improving Health Care Accessibility Through Point-of-Care Technologies**

**April 11-12, 2006**

## **AGENDA**

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### ***Tuesday, April 11***

**7:30 a.m. - 8:00 a.m.**      Registration and Continental Breakfast      **Farragut Foyer**

**8:00 a.m. - 8:10 a.m.**      Welcome and Opening Remarks      **Farragut**  
***Roderic I. Pettigrew, M.D., Ph.D.***  
*Director*  
*National Institute of Biomedical Imaging and*  
*Bioengineering, NIH, DHHS*

**Point-of-Care Testing Overview**      **Farragut**

**8:10 a.m. - 8:30 a.m.**      The Role of Point-of-Care Testing in Improving Health Outcomes  
***Christopher P. Price, Ph.D., FACB, FRSC, FRCPath***  
*Visiting Professor in Clinical Biochemistry*  
*Department of Clinical Biochemistry*  
*John Radcliffe Hospital and University of Oxford*

**8:30 a.m. - 8:50 a.m.**      Technology for Point-of-Care Testing: Issues and Implementation  
***Larry J. Kricka, D.Phil., FACB, CChem, FRSC, FRCPath***  
*Professor of Pathology and Laboratory Medicine*  
*Director of General Chemistry*  
*University of Pennsylvania*

**Technologies for Point-of-Care Testing**      **Farragut**

Sensors and Lab-on-a-Chip Devices

**8:50 a.m. - 9:15 a.m.**      Integrated Lab-on-a-Chip Devices for Point-of-Care Diagnostics  
***John T. McDevitt, Ph.D. (moderator)***  
*Professor, Department of Chemistry and Biochemistry*  
*The University of Texas at Austin*

**9:15 a.m. - 9:40 a.m.**      Acute Care Blood Testing at the Point of Care  
***Imants R. Lauks, Ph.D.***  
*President and Chief Executive Officer*  
*Epocal, Inc.*

**Tuesday, April 11 (continued)**

- 9:40 a.m. - 10:05 a.m.** Point-of-Care Testing for ACS, Heart Failure, and Drug Overdose in the Emergency Room  
**Jeff Bishop, Ph.D.**  
*Principal Scientist*  
*Biosite, Inc.*
- 10:05 a.m. - 10:30 a.m.** The Founding of TheraSense  
**Adam Heller, Ph.D.**  
*Research Professor, Department of Chemical Engineering*  
*The University of Texas at Austin*
- 10:30 a.m. - 10:40 a.m.** Saliva-Based Point-of-Care Diagnostics  
**Eleni Kousvelari, D.D.S., D.Sc.**  
*Acting Director, Center for Biotechnology and Innovation*  
*National Institute of Dental and Craniofacial Research, NIH, DHHS*
- 10:40 a.m. - 11:00 a.m. Break** **Farragut Foyer**
- Noninvasive and Minimally Invasive Monitoring **Farragut**
- 11:00 a.m. - 11:25 a.m.** Important Clinical Targets for Noninvasive Monitoring  
**Donald S. Prough, M.D.**  
*Professor and Chair, Department of Anesthesiology*  
*The University of Texas Medical Branch*
- 11:25 a.m. - 11:50 a.m.** Biomedical Monitoring Using Noninvasive and Minimally Invasive Approaches  
**Gerard L. Coté, Ph.D.**  
*Charles H. and Bettye Barclay Professor and Head, Department of Biomedical Engineering*  
*Texas A&M University*
- 11:50 a.m. - 12:15 p.m.** Noninvasive Monitoring With Novel, High-Resolution Optical Techniques  
**Rinat O. Esenaliev, Ph.D. (moderator)**  
*Associate Professor, Department of Neuroscience and Cell Biology*  
*The University of Texas Medical Branch*
- 12:15 p.m. - 1:15 p.m. Working Lunch** **Decatur**
- 12:45 p.m. - 1:15 p.m.** Overcoming Barriers in the Manufacture of Small Components and Devices  
**Kornel Ehmann, Ph.D.**  
*James N. and Nancy J. Farley Professor in Manufacturing and Entrepreneurship*  
*Department of Mechanical Engineering*  
*Northwestern University*

**Tuesday, April 11 (continued)**

**1:15 p.m. - 1:30 p.m.      Break**

Low-Cost Imaging

**Farragut**

**1:30 p.m. - 1:35 p.m.**      Introduction  
**Rebecca Richards-Kortum, Ph.D.** (moderator)  
*Stanley C. Moore Professor of Bioengineering  
Rice University*

**1:35 p.m. - 2:00 p.m.**      Automated Pathology for Cancer Screening in China  
**Branko Palcic, Ph.D.**  
*Senior Scientist, Department of Cancer Imaging  
University of British Columbia and BC Cancer Agency*

**2:00 p.m. - 2:25 p.m.**      Point-of-Care Cervical Cancer Screening in South Africa  
**Thomas Wright, M.D.**  
*Professor, Department of Pathology  
Columbia University Medical Center*

**2:25 p.m. - 2:50 p.m.**      Miniature Microscopy for Point-of-Care Diagnostics and Parallel  
Microscopy for Automated Diagnosis  
**Michael R. Descour, Ph.D., M.S.**  
*Associate Professor of Optical Sciences  
University of Arizona*

**2:50 p.m. - 3:15 p.m.**      Multifunctional Optical Imaging Agents for Point-of-Care Diagnosis  
and Testing  
**Stephen A. Boppart, M.D., Ph.D.**  
*Associate Professor, Department of Electrical and Computer  
Engineering  
University of Illinois at Urbana-Champaign*

**3:15 p.m. - 3:30 p.m.      Break**

**Dewey**

Informatics and Telehealth

**Farragut**

**3:30 p.m. - 3:55 p.m.**      Medical Information Bus Concepts for Collecting Clinical Patient Data  
From the Intensive Care Unit and Other Acutely Ill Patients  
**Reed M. Gardner, Ph.D.** (moderator)  
*Emeritus Professor and Chair, Department of Medical Informatics  
University of Utah School of Medicine*

***Tuesday, April 11 (continued)***

**3:55 p.m. - 4:20 p.m.** Health Data Collection in Resource-Constrained Environments:  
Real-World Implementation Issues  
***Paul G. Biondich, M.D., M.S.***  
*Research Scientist, Regenstrief Institute*  
*Assistant Professor of Pediatrics*  
*Indiana University School of Medicine*

**4:20 p.m. - 4:45 p.m.** Communications for Rural Health Care  
***Eric Brewer, Ph.D.***  
*Professor, Department of Electrical Engineering and*  
*Computer Science*  
*University of California, Berkeley*

**4:45 p.m. - 5:10 p.m.** Telehealth Services to the Home: The Time  
Has Come  
***Dena S. Puskin, Sc.D.***  
*Director*  
*Office for the Advancement of Telehealth*  
*Health Resources and Services*  
*Administration, DHHS*

**5:10 p.m. - 5:30 p.m.** Break

**5:30 p.m. - 6:30 p.m.** Poster Session (*with light refreshments*) Dewey

***Wednesday, April 12***

**7:30 a.m. - 8:00 a.m.** Registration and Continental Breakfast Farragut Foyer

**8:00 a.m. - 8:10 a.m.** Introductory Remarks Farragut  
***Richard Buckius, Ph.D.***  
*Acting Assistant Director for Engineering*  
*National Science Foundation*

**Clinical Needs and Opportunities in Point-of-Care Testing** Farragut

**8:10 a.m. - 8:40 a.m.** Delivering Health Care in Developing Countries  
***Henry “Skip” Francis, M.D.***  
*Program Officer for Sub-Saharan Africa*  
*Fogarty International Center*  
*National Institutes of Health*

**Wednesday, April 12 (continued)**

- 8:40 a.m. - 9:40 a.m.**      The Potential of Point-of-Care Testing To Revitalize Primary Care Office Practice  
**John M. Hickner, M.D., M.Sc.**  
*Professor of Family Medicine*  
*University of Chicago Pritzker School of Medicine*
- 9:40 a.m. - 10:30 a.m.**      Emergency Medical Services: Needs and Opportunities in Point-of-Care Testing  
**Robert M. Domeier, M.D., FACEP**  
*EMS Coordinator*  
*Saint Joseph Mercy Hospital*
- 10:30 a.m. - 11:00 a.m.**      **Break** **Farragut Foyer**
- Panel on Home Point-of-Care Testing: One Location, Many Care Models **Farragut**
- 11:00 a.m. - 11:15 a.m.**      The Many Faces of Home Point-of-Care Monitoring  
**Justin Starren, M.D., Ph.D., FACMI (moderator)**  
*Associate Professor of Clinical Biomedical Informatics and Clinical Radiology*  
*Columbia University Medical Center*
- 11:15 a.m. - 11:30 a.m.**      Use of Point-of-Care Testing in Home Health Care: Opportunities and Challenges  
**Carolyn R. Krause, Ph.D., R.N.**  
*Executive Director*  
*Wisconsin Center for Nursing*
- 11:30 a.m. - 11:45 a.m.**      Disease Management: A Quantum Leap in Quality Improvement  
**Maureen A. Dailey, M.S.N., R.N., CWOCN**  
*Consultant*  
*Dailey Solutions*
- 11:45 a.m. - 12 noon**      Patient Portals: Connecting Clinicians and Patients at Home  
**James Ralston, M.D., M.P.H.**  
*Assistant Investigator*  
*Center for Health Studies*  
*Group Health Cooperative*
- 12 noon - 12:15 p.m.**      The “Self-Managed” Patient  
**Patricia Flatley Brennan, Ph.D., R.N., FAAN, FACMI**  
*Moehlman Bascom Professor*  
*School of Nursing and College of Engineering*  
*University of Wisconsin-Madison*
- 12:15 p.m. - 12:30 p.m.**      Q&A Session on Home Health Care

**Wednesday, April 12 (continued)**

**12:30 p.m. - 1:50 p.m.    Working Lunch** (*with breakout sessions*)

**Room 1**

**Farragut**

**1:00 p.m. - 1:25 p.m.**    Improving Health Care Accessibility  
Through Point-of-Care Technologies:  
Issues From the IVD Industry Perspective  
**Paul D’Orazio, Ph.D.**  
*Director of Sensor Development  
Instrumentation Laboratory*

**Room 2**

**Decatur**

**1:00 p.m. - 1:25 p.m.**    Systems Engineering and Health Care  
**Ronald L. Rardin, Ph.D., M.P.A.**  
*Professor, School of Industrial Engineering  
Regenstrief Center, Purdue University*

**1:25 p.m. - 1:50 p.m.**    Imaging and Point-of-Care Technologies  
**Kai Erik Thomenius, Ph.D., M.S.**  
*Chief Technologist, Ultrasound and  
Biomedical Imaging Technologies  
GE Global Research*

**1:50 p.m. - 2:00 p.m.    Break**

**2:00 p.m. - 2:30 p.m.**    Point-of-Care Technologies, Telehealth, and  
Indian Health Care  
**Mark F. Carroll, M.D.**  
*Telehealth Program Director  
Indian Health Service, DHHS*

**Farragut**

**Evidence and Policy Decisions in Point-of-Care Testing**

**Farragut**

**2:30 p.m. - 2:45 p.m.**    Evidence To Support Policy Decisions on Point-of-Care Testing  
**Christopher P. Price, Ph.D., FACB, FRSC, FRCPATH**  
*Visiting Professor in Clinical Biochemistry  
Department of Clinical Biochemistry  
John Radcliffe Hospital and University of Oxford*

**Wednesday, April 12 (continued)**

FDA and CMS Perspectives

**Farragut**

**2:45 p.m. - 3:00 p.m.** Center for Devices and Radiological Health Review Practice for Point-of-Care Devices: A Diagnostic Perspective

***Arleen F. Pinkos***

*Scientific Reviewer*

*Office of In Vitro Diagnostic Device Evaluation and Safety*

*Center for Devices and Radiological Health*

*U.S. Food and Drug Administration, DHHS*

**3:00 p.m. - 3:15 p.m.** Regulation of Point-of-Care Medical Devices

***Anthony D. Watson, M.S., M.B.A.***

*Chief, General Hospital Devices Branch*

*Center for Devices and Radiological Health*

*U.S. Food and Drug Administration, DHHS*

**3:15 p.m. - 3:30 p.m.** The Medicare Coverage Process

***Shamiram Feinglass M.D., M.P.H.***

*Senior Medical Officer*

*Coverage and Analysis Group, Office of Clinical Standards and Quality*

*Centers for Medicare & Medicaid Services*

**3:30 p.m. - 3:45 p.m.** Q&A Session on Evidence and Policy Decisions

**3:45 p.m. - 4:00 p.m.** **Break**

**Farragut Foyer**

**4:00 p.m. - 4:30 p.m.** Review of NIH/NSF Recommendations

**Farragut**

***Larry J. Kricka, D.Phil., FACB, CChem, FRSC, FRCPATH***

*Professor of Pathology and Laboratory Medicine*

*Director of General Chemistry*

*University of Pennsylvania*

**4:30 p.m. - 4:35 p.m.** **Closing Remarks**